

Applicants : Marshall Medoff et al.  
Serial No. : 09/772,593  
Filed : January 30, 2001  
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Attorney Docket No.: 08895-019001

**REMARKS**

In response to the Notice of Non-Compliant Amendment mailed July 20, 2005, Applicants are re-submitting the Claims Section of the Amendment filed June 22, 2005. In particular, the Applicants have specified that claims 52 and 53 have been withdrawn from consideration. A copy of the amendment filed June 22, 2005 is submitted herewith.

It is not believed that any fees are due, but please apply any charges or credits to deposit account 06-1050, referencing Attorney Docket No. 08895-019001.

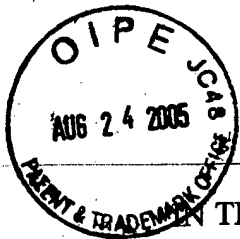
Respectfully submitted,

Date: August 19, 2005

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : Marshall Medoff et al.                      Art Unit : 1711  
Serial No. : 09/772,593                                      Examiner : Nathan M. Nutter  
Filed : January 30, 2001  
Title : CELLULOSIC AND LIGNOCELLULOSIC MATERIALS AND  
             COMPOSITIONS AND COMPOSITES MADE THEREFROM

**Mail Stop Amendment**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

AMENDMENT IN REPLY TO ACTION OF APRIL 4, 2005

Please amend the above-identified application as follows:

**CERTIFICATE OF MAILING BY FIRST CLASS MAIL**

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

June 22, 2005

Date of Deposit

  
Signature

Sherry L. Hunt

Typed or Printed Name of Person Signing Certificate

**AMENDMENTS TO THE CLAIMS:**

This listing of claims replaces all prior versions and listings of claims in the application:

**Listing of Claims:**

1. (Currently Amended) A composite comprising a thermoplastic resin and fiber, wherein the fiber is cellulosic or lignocellulosic fiber that has been sheared a length-to-diameter ratio of at least 5.
2. (Original) The composite of claim 1, comprising at least about 5% by weight sheared fiber.
3. (Original) The composite of claim 1, wherein the fiber is newsprint.
4. (Original) The composite of claim 1, wherein the fiber is jute.
5. (Original) The composite of claim 1, wherein the fiber is kenaf.
6. (Original) The composite of claim 1, wherein the fiber is magazine paper.
7. (Original) The composite of claim 1, wherein the fiber is bleached kraft board.
8. (Original) The composite of claim 1, wherein the fiber is poly-coated paper.
9. (Cancelled)

10. (Previously Presented) The composite of claim 1, wherein the thermoplastic resin is selected from the group consisting of polystyrene, polycarbonate, polybutylene, thermoplastic polyesters, polyethers, thermoplastic polyurethane, PVC, and Nylon.
11. (Original) The composite of claim 9, wherein the thermoplastic resin is polyethylene.
12. (Previously Presented) The composite of claim 9, wherein the thermoplastic resin is polypropylene.
13. (Original) The composite of claim 1, wherein the composite comprises about 30% to about 70% by weight thermoplastic resin and about 30% to about 70% by weight fiber.
14. (Currently Amended) A composite comprising polyethylene and fiber, wherein the fiber is cellulosic or lignocellulosic fiber that has ~~been sheared~~ a length-to-diameter ratio of at least 5.
15. (Currently Amended) A composite comprising a thermoplastic resin and fiber, wherein the composite has a flexural strength of at least 3,000 psi, and wherein the fiber is cellulosic or lignocellulosic fiber that has ~~been sheared~~ a length-to-diameter ratio of at least 5.
16. (Original) The composite of claim 15, wherein the composite has a flexural strength of at least 6,000 psi.
17. (Original) The composite of claim 15, wherein the composite has a flexural strength of at least 10,000 psi.
- 18-44 (Cancelled).
45. (Original) The composite of claim 1, further comprising an inorganic additive.

46. (Original) The composite of claim 45, wherein the inorganic additive is selected from the group consisting of calcium carbonate, graphite, asbestos, wollastonite, mica, glass, fiber glass, chalk, talc, silica, ceramic, tire rubber powder, carbon fibers, and metal fibers.

47. (Original) The composite of claim 46, wherein the inorganic additive comprises from about 0.5% to about 20% of the total weight of the composite.

48. (Original) The composite of claim 1, wherein said composite is in the form of a pallet.

49. (Original) The composite of claim 48, wherein said pallet is injection molded.

50. (Previously Presented) The composite of claim 1, wherein said composite is in the form of an article selected from the group consisting of panels, pipes, decking materials, boards, housings, sheets, poles, straps, fencing, members, doors, shutters, awnings, shades, signs, frames, window casings, backboards, wallboards, flooring, tiles, railroad ties, forms, trays, tool handles, stalls, bedding, dispensers, staves, films, wraps, totes, barrels, boxes, packing materials, baskets, straps, slips, racks, casings, binders, dividers, walls, indoor and outdoor carpets, rugs, wovens, and mats, frames, bookcases, sculptures, chairs, tables, desks, art, toys, games, wharves, piers, boats, masts, pollution control products, septic tanks, automotive panels, substrates, computer housings, above- and below-ground electrical casings, furniture, picnic tables, tents, playgrounds, benches, shelters, sporting goods, beds, bedpans, thread, filament, cloth, plaques, trays, hangers, servers, pools, insulation, caskets, bookcovers, clothes, canes, crutches, and other construction, agricultural, material handling, transportation, automotive, industrial, environmental, naval, electrical, electronic, recreational, medical, and textile.

51. (Original) The composite of claim 1, wherein said composite is in the form of a fiber, filament, or film.

54. (Currently Amended) A composite comprising a resin, fiber, and an inorganic additive, wherein the fiber is cellulosic or lignocellulosic fiber that has ~~been sheared~~ a length-to-diameter ratio of at least 5.

55. (Previously Presented) The composite of claim 54, wherein the inorganic additive is selected from the group consisting of calcium carbonate, graphite, asbestos, wollastonite, mica, glass, fiber glass, chalk, talc, silica, ceramic, tire rubber powder, carbon fibers, and metal fibers.

56. (Previously Presented) The composite of claim 54, wherein the composite comprises about 30% to about 70% by weight resin, about 30% to about 70% fiber, and about 0.5% to about 30% by weight inorganic fiber.

57. (Currently Amended) A composite comprising a resin and fibers, wherein the fiber is cellulosic or lignocellulosic fiber ~~that has been sheared~~ and wherein at least 50% of the fibers have a length to diameter ratio of at least 50.

58. (Cancelled)

59. (Cancelled)

60. (Previously Presented) The composite of claim 57, wherein the composite comprises about 30% to about 70% by weight resin and about 30% to about 70% by weight fibers.

61. (Previously Presented) The composite of claim 57, further comprising an inorganic additive.

62. (Previously Presented) The composite of claim 61, wherein the inorganic additive is selected from the group consisting of calcium carbonate, graphite, asbestos, wollastonite, mica, glass, fiber glass, chalk, talc, silica, ceramic, tire rubber powder, carbon fibers, and metal fibers.

63. (Previously Presented) The composite of claim 61, wherein the resin is a thermoplastic resin.

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64. (New) The composite of claim 1, wherein the length-to-diameter ratio is at least 10.
65. (New) The composite of claim 1, wherein the length-to-diameter ratio is at least 25.
66. (New) The composite of claim 1, wherein the fiber is cotton.

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**AMENDMENTS TO THE DRAWINGS:**

The attached replacement sheet of drawings replaces the original sheet. No amendments are being made to the drawing.

Attachment following last page of this Amendment:

Replacement Sheet (1 pages)



### REMARKS

Claims 1, 14, 15, 54 and 57 have been amended, and claim 9 has been cancelled herewith. Claims 64-66 are new. No new matter has been introduced. Support for the amendments to claims 1, 14, 15 and 54, and new claims 64 and 65 can be found, e.g., at page 2, lines 15-17 of the Applicant's Specification. Support for new claim 66 can be found, e.g., at page 2, line 4 of the Applicant's Specification.

A replacement photograph (Fig. 1) is submitted herewith. Please replace the formal drawing (photograph) submitted on January 18, 2002 by the enclosed photograph.

An IDS is submitted herewith. Applicants respectfully request that the Examiner consider the enclosed reference.

Claims 1-17, 45-51, 54-57 and 60-63 have been rejected under the doctrine of obviousness-type double patenting over U.S. Patent No. 5,952,105 or U.S. Patent No. 6,448,307. Applicants will file a terminal disclaimer when the Examiner has indicated that the claims are otherwise allowable.

Claims 1-3, 5 and 9-17 have been rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Laver, U.S. Patent No. 5,516,472 ("Laver"). Applicants do not agree with the rejection, but have nevertheless amended independent claims 1, 14 and 15.

As amended, claim 1 features a composite that includes a thermoplastic resin and fiber. The fiber is cellulosic or lignocellulosic fiber that has a length-to-diameter ratio of at least 5.

As amended, claim 14 features a composite that includes polyethylene and fiber. The fiber is cellulosic or lignocellulosic fiber that has a length-to-diameter ratio of at least 5.

As amended, claim 15 features a composite that includes a thermoplastic resin and fiber. The composite has a flexural strength of at least 3,000 psi, and the fiber is cellulosic or lignocellulosic fiber that has a length-to-diameter ratio of at least 5.

Laver discloses that his cellulose materials are "comminuted" to a flour prior to mixing with resin. For example, it is disclosed at column 8, lines 23-27 that (emphasis added)

the cellulose materials are comminuted by conventional particle reduction equipment known to the art. These may include grinders, ball mills, choppers or other equipment capable of reducing the fiber to a flour of a distinct particle size or range of sizes.

In addition, the Examples at the bottom of page 7 disclose wood flour. Laver does not disclose or suggest a cellulosic or lignocellulosic fiber that has a length-to-diameter ratio of at least 5, as claims 1, 14 and 15 now require. Rather, Laver discloses materials in the form of particles (flours), which would inherently have a low length-to-diameter ratio, e.g., approaching 1. In fact, Laver does not fairly disclose a fiber at all, but particles. Applicants submit that, as amended, independent claims 1, 14 and 15 are novel over Laver, as are all claims depending therefrom, and respectfully request that the rejection be withdrawn.

Claims 1-17, 48-51 and 57 have been rejected under 35 U.S.C. §103(a) as being allegedly obvious over Laver. Amended claims 1, 14 and 15 have been summarized above. Amended claims 54 and 57 are summarized below.

As amended, claim 54 features a composite that includes a resin, fiber, and an inorganic additive. The fiber is cellulosic or lignocellulosic fiber that has a length-to-diameter ratio of at least 5.

As amended, claim 57 features a composite that includes a resin and fibers. The fiber is cellulosic or lignocellulosic fiber. At least 50% of the fibers have a length-to-diameter ratio of at least 50.

As discussed above, Laver discloses materials in the form of particles (flours), which would inherently have a low length-to-diameter ratio, e.g., approaching 1. Laver does not disclose or suggest a cellulosic or lignocellulosic fiber that has a length-to-diameter ratio of at least 5, as now required by claims 1, 14, 15, and 54. Regarding claim 57, Laver also does not disclose or suggest a cellulosic or lignocellulosic fiber in which at least 50% of the fibers have a length-to-diameter ratio of at least 50. In fact, Laver does not disclose or suggest any length-to-diameter ratio because he generally discloses particles, i.e., having a length-to-diameter ratio approaching 1.

The Examiner contends that the choice of a cellulosic source would be a clear modification to one of ordinary skill in the art, "especially in view of the teaching in Laver at column 6 (line 30) in reference to "any kind of waste cellulosic material." (page 4, 3<sup>rd</sup> paragraph of the Office Action). Applicants disagree because different forms of cellulosic materials, e.g., ground cellulosic particles, or cellulosic fibers having a substantial length-to-diameter ratio,

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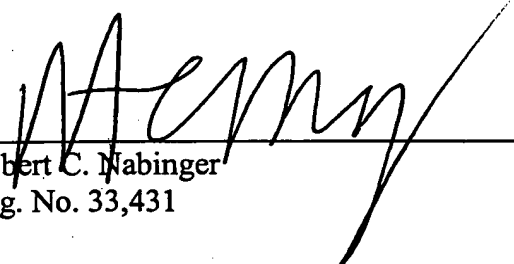
impart different properties to resulting composites. Furthermore, there is no disclosure or suggestion in Laver that providing a fiber having a substantial length-to-diameter is advantageous in any way. In contrast, Applicants state in several places in the Specification, e.g., at page 6, line 9, that the resulting composites are unexpectedly "strong, light-weight, and inexpensive."

Applicants respectfully submit that all claims are in condition for allowance.

Please apply any charges or credits to deposit account 06-1050, referencing Attorney Docket No. 08895-019001.

Respectfully submitted,

Date: June 22, 2005

  
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FIG. 1